

PERSONALITY TRAITS RELATED TO CHIPS CONSUMPTION: A CASE-CONTROL STUDY IN ADOLESCENTS FROM ROMANIA

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PERSONALITY TRAITS RELATED TO CHIPS CONSUMPTION: A CASE-CONTROL STUDY IN ADOLESCENTS FROM ROMANIA (Abstract): In this study it is investigated whether there is a relation between personality traits of adolescents and consumption of chips.

Material: The study was performed on 2 groups of adolescents: a study group – 248 adolescent (43.1% male and 56.9% female) who consume chips two or more times/day and a control group – 481 adolescent (51% male and 49% female) who do not consume chips at all. Case-control samples were selected from 2908 teenagers. **Method:** The method was case-control observational inquiry and consisted in applying 2 questionnaires: Freiburg Personality Inventory (Cronbach`s alpha=0.802) and CORT (Cronbach`s alpha =0.910) from which it was extracted 1 item Q107 (frequency of chips consumption). **Results:** The personality profile of the study group is different from the personality profile of the control group; significant statistical differences (Significance=0.000) between the group of study and the control group for nervousness (chi square - $\chi^2=22.516$), aggressiveness ($\chi^2=22.877$), excitability ($\chi^2=27.132$), domination ($\chi^2=21.152$) and extraversion ($\chi^2=9.770$) were found. **Conclusion:** The results suggest a relation between personality traits of adolescents and consumption of chips. **Keywords:** CHIPS, PERSONALITY, ADOLESCENTS, OBSERVATIONAL STUDY.

Teenage is a developmental stage in human life when integration is followed by recycling that lasts for the rest of the life (1). Consumption of potato chips tends to increase with the progress in technology (2). Being addictive (3), chips consumption is a diet risk behavior in adolescence. The aim of the performed study was to investigate whether personality traits of adolescents relate to the excessive consumption of chips.

MATERIAL AND METHOD

This study was performed on sample of

2908 teenagers (51.5% females, 48.5% males, aged 15-19 years) provided by an urban area in south-western Romania. The ethical approval of the University Ethical Committee was asked for and obtained. The study conducted was a case-control observational inquiry and it consisted in applying 2 questionnaires: CORT questionnaire (“Comportamente cu risc la tineri” – “Risk behaviors in young people” - 126 items of risk behaviors with Cronbach`s alpha index=0.910) (4), and FPI (Freiburg Personality Inventory - 212 items with Cronbach`s alpha index=0.802,

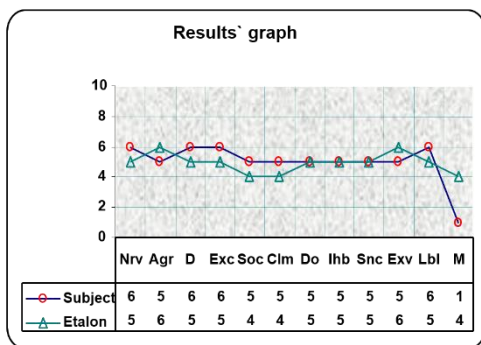
normalized for the Romanian population) (5). From CORT questionnaire it was considered only item Q107, referring to chips consumption as diet risk behavior. Item Q107: “How many times per week do you consume chips?” had 5 possible answers depending on the level of risk. For the study the groups with risk 0 (control – 481 adolescents who do not consume at all chips; 51% females, 49% males) and risk 4 (case – 248 adolescents who consume 2 or more times/day chips; 57% females, 43% males) were chosen. Personality bipolar traits measured by Freiburg Personality Inventory consisted in Nervousness (Nrv), Aggressiveness (Agr), Depression (D), Excitability (Exc), Sociability (Soc), Calm (Clm), Domination (Do), Inhibition (Inh), Sincerity (Snc), Extraversion (Exv), Emotional lability (Lbl). Masculinity (M) was not taken into consideration due to the risk of misinterpreting this trait by Excel 2003 Program. Both questionnaires were applied individually and anonymously, in the same

1 hour and a half session. The informed consent of each student to participate was asked for and obtained. A personality profile was built by an Excel 2003 Program considering the median frequency value of the intensity of all the 9 ranks of each personality dimension. This personality profile could be compared with the etalon (profile established and standardized for the adult Romanian population). The personality traits of the 2 groups of teenagers for chips consumption (Q107=0 and Q107=4) were analyzed and compared. The Body Mass Index (BMI) was considered for the group of study and for the control group.

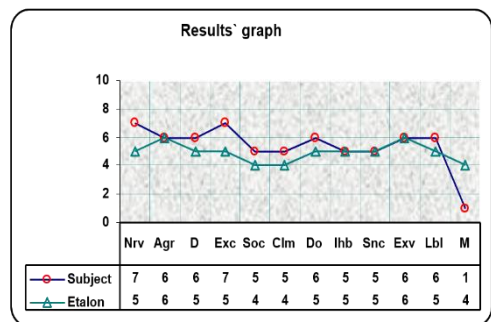
Statistical work (Chi square- χ^2 and gamma correlation- γ) was performed using a *SPSS Statistics 20*.

RESULTS

The established personality profiles of adolescents considering the median value of frequency for the control-group and the study-group were different.



Q107=0



Q107=4

Fig. 1. Personality profiles of control-group (Q107=0) and study-group (Q107=4)

The study-group has 5 personality traits (Nrv, Agr, Exc, Do and Exv) with higher intensity than the control-group. In the profile of the study-group 2 personality traits (Nrv and Exc) were outside the etalon

interval (4-6) with the registered ranks=7. All the personality traits for the control-group were included in the etalon interval (4-6) (fig. 1).

The 9 intensity ranks of the personality

Personality traits related to chips consumption: a case-control study in adolescents from Romania

traits reduced to 3 (1=1-3 -low intensity; 2=4-6 -the average or etalon interval and 3=7-9 -high intensity of the trait) offered the possibility of applying Chi square. A significant statistical difference between the control-group (adolescents with no consumption of chips) and the study-group (adolescents

with high level consumption of chips) was registered for certain personality traits (Nrv, Agr, Exc, Do, Exv) after applying Chi square (tab. I). The calculated gamma correlation coefficients indicated positive correlations: Q107-Nrv, Q107-Agr, Q107-Exc, Q107-Do and Q107-Exv (tab. II).

TABLE I
Chi square test Q107 (0 and 4) - personality traits

Chi-Square – χ^2	Value	df	Asymptotic Significance (2-sided)
Q107 * Nrv	22.518 ^a	2	0.000
Q107 * Agr	20.877 ^a	2	0.000
Q107 * Exc	27.132 ^a	2	0.000
Q107 * Do	21.152 ^a	2	0.000
Q107 * Exv	9.770 ^a	2	0.008

Note. a. 0 cells (0%) have expected count less than 5. The minimum expected counts are 24.97 (q107 * Nrv), 25.38 (q107 * Agr), 24.03 (q107 * Exc), 27.75 (q107 * Do) and 29.78 (q107 * Exv).

TABLE II
Gamma (γ) correlation Q107 (0 and 4) - personality traits

Ordinal by Ordinal Correlations	γ	Asymptotic Standard Error ^a	Approx Sig.
Q107 * Nrv	0.352	0.069	0.000
Q107 * Agr	0.328	0.068	0.000
Q107 * Exc	0.363	0.066	0.000
Q107 * Do	0.332	0.067	0.000
Q107 * Exv	0.233	0.076	0.003

Note. a. Not assuming the null hypothesis;

b. Using the asymptotic standard error assuming the null hypothesis.

Nervousness was the only personality trait which registered a weak statistically significant difference between females and males ($\chi^2 = 7.869$, Significance = 0.02, $\gamma = -0.357$, Significance = 0.005). No significant statistical difference and no γ correlation between females and males were registered for other traits of the personality profile. There was also no statistically significant difference of personality profile

depending on age or BMI.

DISCUSSION

The results of this study are consistent with recent studies and appear to complement previous results. Recent studies supported the hypothesis that personality can affect dietary intake (6, 7). A result of the study conducted (personality profile and statistically significant difference between

case-control groups) was that adolescents who had high chips consumption also had high spontaneous aggressiveness (Agr) and reactive aggressiveness (Do), reduced tolerance to frustration (increased Exc) and increased somatic-affective resonance (Nrv) and extraversion (Exv). Nervousness and excitability were clearly excessive and were outside the etalon interval (ranks 7) in the study-group profile. Another study demonstrates that personality traits (neuroticism, extraversion, openness, agreeableness, and conscientiousness) are associated with dietary intake. These associations were stronger in female than male subjects (8). In the performed study, only nervousness was higher -with weak statistical significance- in the female than the male subjects. In the conducted study, the high level of excitability (reduced tolerance to frustration) found in the study-group (females and

males) involves increased reaction to a stimulus and a feeling of stress. In other research study on this topic, 33% of the subjects answered that they consumed higher amounts of chips when they are under stress (9). A limitation of this study is that it is an observational one and it approaches qualitative aspects only.

CONCLUSIONS

The study conducted demonstrates a specific personality profile of the population of adolescents with excessive chips consumption and it suggests a relation of certain personality traits with chips consumption behavior.

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